

MUOS High Power Amplifier (MHPA)

For AN/PRC-155 Manpack Radios



Converged voice and IP data services

Crystal clear voice quality

Dial-up voice calls to any other MUOS terminal or SCIP-enabled DISN (land line) phone worldwide

Group communications mode

Virtually unlimited communications range

Data communications via any other MUOS terminal worldwide and access to designated SIPRNET or NIPRNET servers

Voice and data MUOS to Legacy Waveforms Route & Retrans (bridging)

Classified up to Top Secret

Overview

The MUOS High Power Amplifier (MHPA) is an appliqué for the AN/PRC-155 2-Channel Manpack radio. The MHPA replaces the standard High Power Amplifier (HPA) on either channel of the AN/PRC-155 Manpack radio. With the MHPA attached, the AN/PRC-155 Manpack radio becomes MUOS enabled providing a worldwide satellite-based communications capability, derived from 3GPP UMTS cellular technology. The route and retrans capability enables disparate networks, using legacy waveforms to be connected through the MUOS satellite system.

The combination of the AN/PRC-155 Manpack radio and MHPA provides dismounted soldiers voice and data communications while "on the move" using a lightweight, low-profile antenna. There is no need to stop, setup or position special antennas.

The First MUOS Ground Terminal for the Military

The MHPA provides users with powerful new ways to communicate with each other and with higher command authorities. Several voice communications modes allow for both cell-phone like voice calls to other individual users or PTT talk groups of almost unlimited size and geographic dispersal, as supported by the MUOS satellite system.

The system also allows users to connect a standard laptop to the terminal and login to a SIPRNET or NIPRNET server from virtually anywhere in the world. Seamless Teleport services allow calls to be made to landline and terrestrial networks just as easily as to other MUOS terminals.

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Technical Specifications

- **Case dimensions:**
 - 6.45" x 3.00" x 1.83"
- **MHPA compatibility with AN/PRC-155 Manpack radio**
 - Interchangeable with HPA on either CH1 or CH2
- **Interfaces**
 - MUOS Antenna Port
 - Single N-Type connector
 - 12 watt average output power (+40.8 dBm)
 - Legacy Antenna Port
 - Single N-Type connector
 - Legacy waveforms including SRW, SINGARS, SATCOM
 - Programming
 - Field loadable through AN/PRC-155 Manpack radio interface
 - JENM Compatible
 - Spectral Adaption
 - 24 dB minimum notch depth
- **Transmitter**
 - Frequency Range: 300 MHz - 320 MHz
 - Harmonic Suppression: 2nd and 3rd harmonics: - 60 dB min
- **Receiver**
 - Frequency Range: 360 MHz - 380 MHz
 - MUOS Adjacent Channel Rejection UHF
 - 45 dB minimum
- **Max. power output**
 - 12 Watts
- **MUOS Voice and Data Modes**
 - G.729
 - MELP-E (STANAG 4591)
 - IF data rate (kbps): 9.6, 32, and 64
 - Serial data rates (kbps): 4.8, 9.6, 16, 32, and 64
- **Crypto compatibility**
 - Fully compatible with COMSEC and TRANSEC
 - Type 1 Suite A
- **Part Number**
 - 01-P56541U002
 - NSN 5996-01-619-6176
- **MUOS Antenna Options**
 - Soldier-on-the-Move (SOTM) P/N P/N 85-P53508R001 NSN 5330-01-632-1572
 - Vehicle-on-the-Move (VOTM) P/N GD2100/1P24 NSN 5985-01-628-3023
 - At-the-Pause (ATP) P/N AV2135 NSN TBD

Features and Benefits

- Easy AN/PRC-155 Manpack radio field installation on either channel
- Modular design for ease of technology upgrades
- Ruggedized (MIL-STD 810F), lightweight chassis that is EMI/EMC compliant
- Upgraded automatically during AN/PRC-155 field software updates
- Compatible with AN/PRC-155 Manpack radio CTN-certified legacy waveforms



GENERAL DYNAMICS
Mission Systems

HMSinfo@gd-ms.com • GDMissionSystems.com/radios

US & Canada: 1-877-449-0600 • Global: Your AT&T Country Code + 877-466-9467 • DSN: 312-282-1048

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D-HMSMUOS-4-0216